

A NEW SPECIES OF *CHONOPELTIS* (CRUSTACEA: BRANCHIURA) FROM SOUTHERN AFRICA

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INTRODUCTION

THE genus *Chonopeltis* Thiele, 1901 is endemic to Africa and comprises seven known species. The southernmost record of this genus is that of *C. meridionalis* Fryer from the Limpopo river system in Rhodesia (Fryer, 1968). It was interesting, therefore, to discover some specimens of *Chonopeltis* in a collection of crustaceans parasitic on freshwater fishes of the Orange river system. The specimens represent a new species which is described below.

DESCRIPTION OF NEW SPECIES

Chonopeltis australis sp. nov.

DIAGNOSIS. With characters of genus. Female body squat, with 2 longitudinal bands of pigment spots on thorax. Second maxilla with scale-covered prominence on proximal portion. Leg 3 less than twice as long as leg 4. Male lacking posterior projections on leg 2 sympod and lacking process on exopod of leg 4.

DESCRIPTION. *Adult female.* General appearance squat (Figs 1a, 2a), large trifoliate carapace comprising about 54% of total body length. Lateral lobes of carapace extending posteriorly to cover the bases of leg 2; oval respiratory areas on ventral surface of each lateral lobe similar to other species of genus. Chitinous supporting rods present in anterior lobe of carapace. Eyes small; ocellus small, distance between ocellus and eyes equal to interocular distance. Segmentation of thorax distinct. Two longitudinal bands of dark pigment spots present on thorax, dorsal to uteri. Abdomen comprising 20–24% of total body length. Furcal rami minute. Spermathecae short, extending to level of bifurcation of abdomen in some specimens.

First antenna (Fig. 2e) slender, indistinctly 5-segmented; apical segment bearing 3 spines. Mandible (Fig. 2b) curved, bearing 3–4 rows of denticles on convex surface and a row of spinules on concave margin. Suckers (first maxillae) as in other species of the genus. Second maxillae (Fig. 2d) with a 2-segmented proximal portion and 3-segmented distal portion; scale-covered prominence present on posterior surface near apex of second segment opposing a small elevated region on third segment; 2 small claws situated in depression at tip of terminal segment. Legs 1–4 biramous; sympod and both rami armed with single rows of setae; legs 1–3 similar in size, leg 4 about two-thirds as large as leg 3. Natatory lobes of leg 4 (Fig. 2c) extensive, meeting at ventral midline, with spinules present on posterior and medial margins.

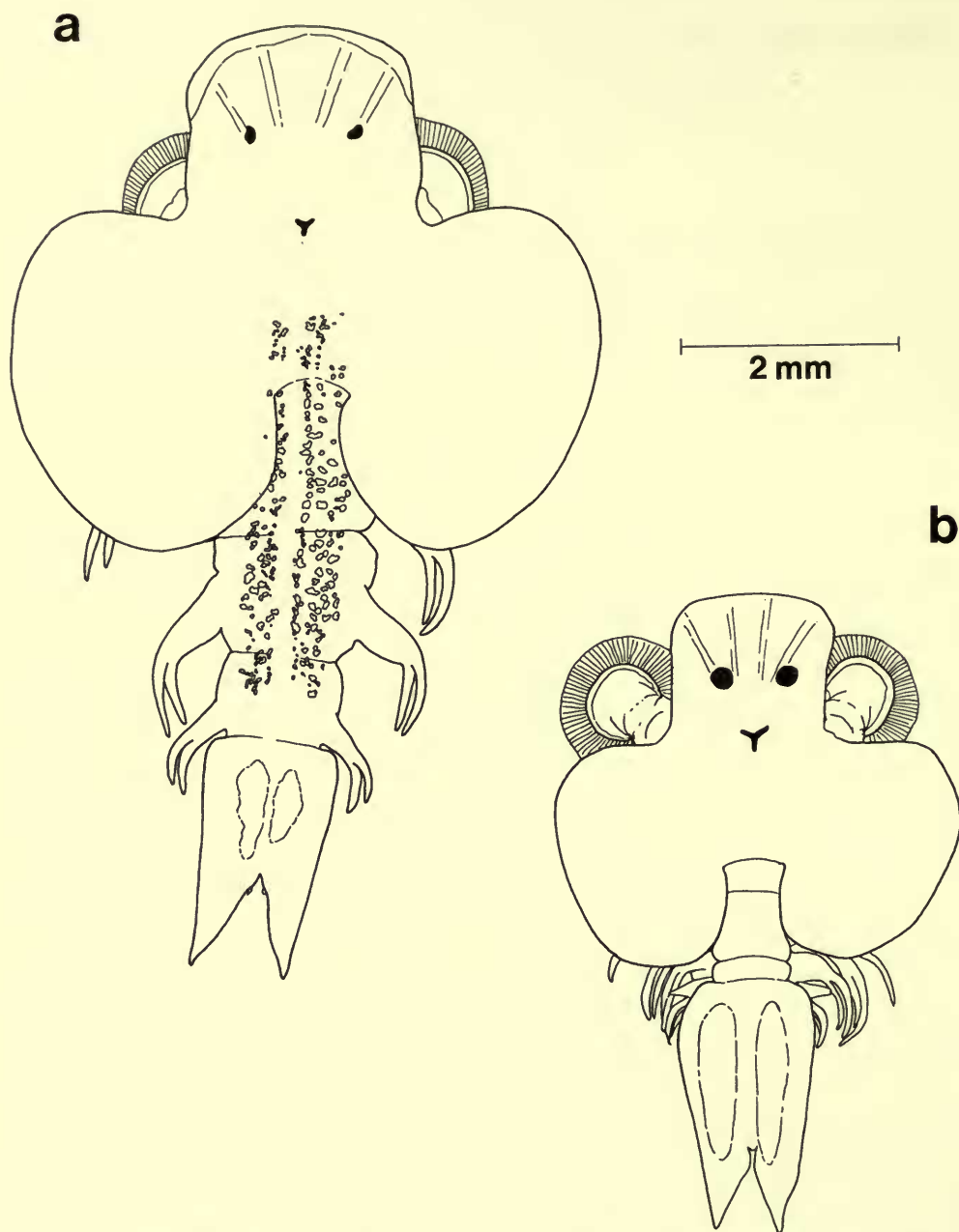


FIG. 1. *Chonopeltis australis* sp. nov.: (a) adult female, dorsal; (b) adult male, dorsal.

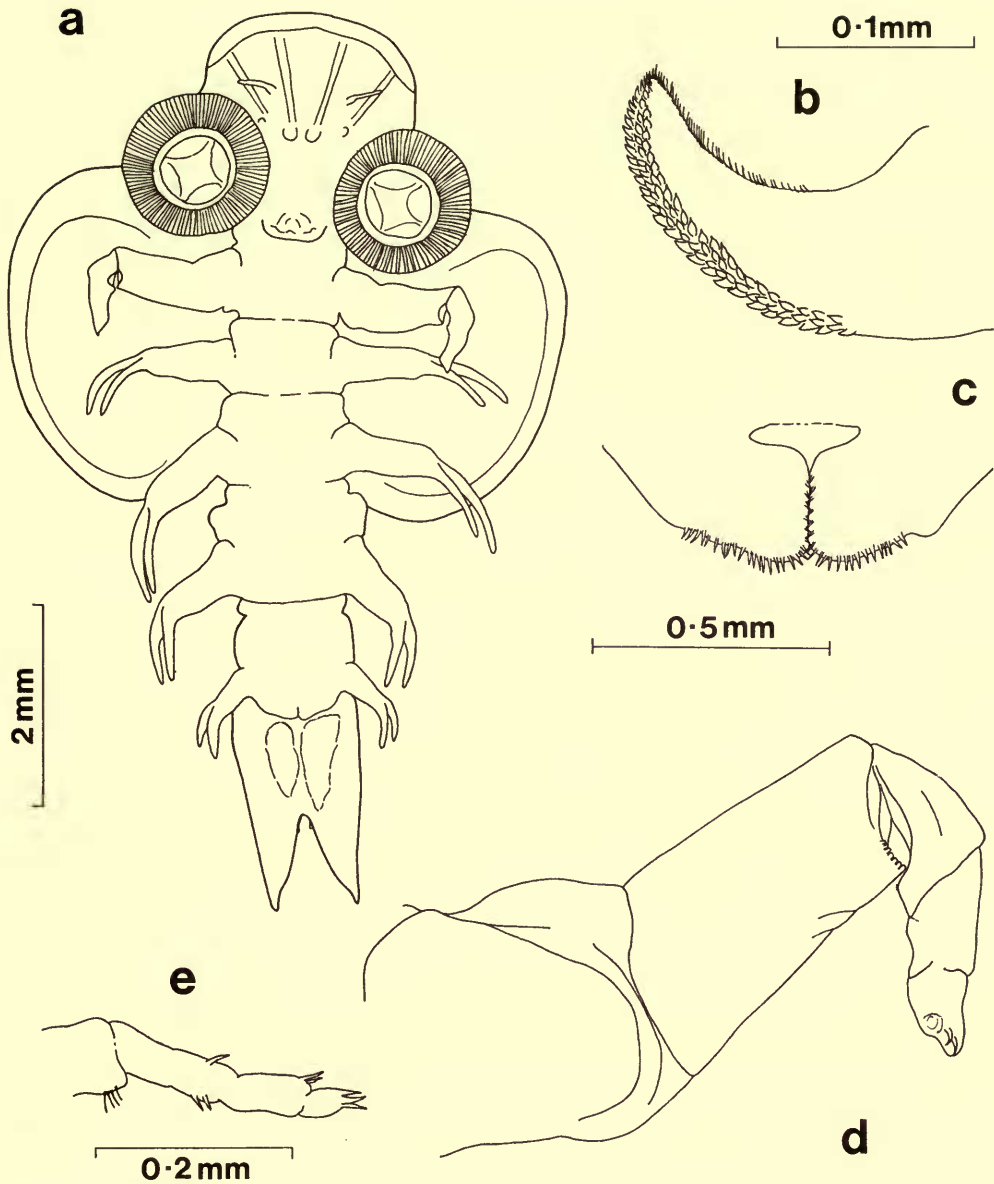


FIG. 2. *Chonopeltis australis* sp. nov.: (a) adult female, ventral; (b) mandible, ventral; (c) natatory lobes female, ventral; (d) second maxilla female, ventral; (e) first antenna female, ventral.

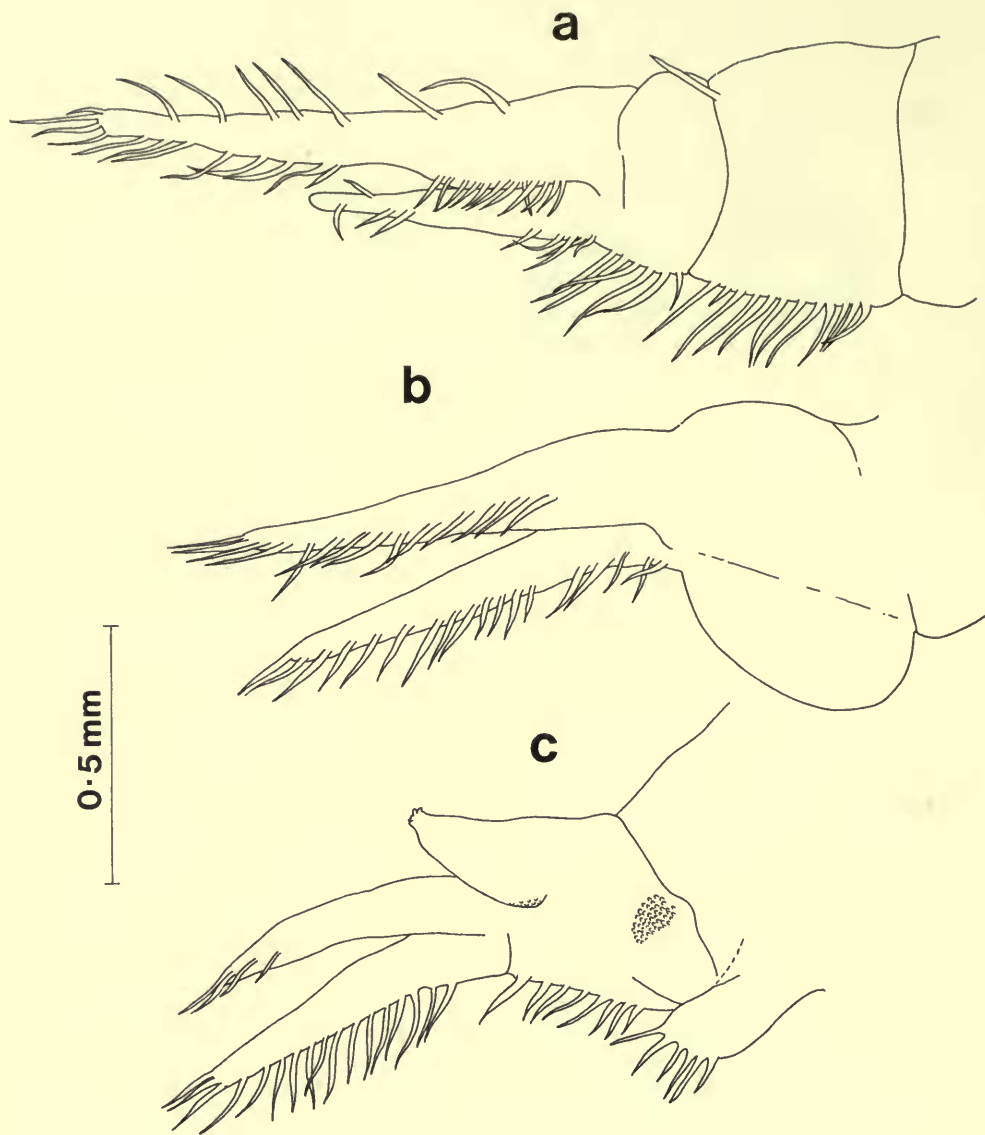


FIG. 3. *Chonopeltis australis* sp. nov. male: (a) leg 2; (b) leg 3; (c) leg 4.

Body length 5.0–8.9 mm, with a mean of 6.8 mm (based on 8 specimens).

Adult male. Carapace comprising about 57% and abdomen about 34% of total body length (Fig. 1b). Anterior appendages as in female. Legs 2–4 showing sexual characters; leg 2 without any projections on posterior margin of sympod (Fig. 3a); sympod of leg 3 (Fig. 3b) bearing an extensive marginal flap posteriorly; leg 4 (Fig. 3c) with an antero-laterally directed conical process on sympod, exopod simple without any processes.

Body length 3.8–5.8 mm, with a mean of 4.5 mm (based on 8 specimens).

MATERIAL EXAMINED. 9♀♀ (1 damaged) and 8♂♂ specimens. Holotype ♀ reg. no. 1975.1092; paratypes reg. nos 1975.1093–1108; deposited in the collections of the British Museum (Natural History).

DISTRIBUTION. *C. australis* was collected from the body surface of *Labeo capensis* Smith and *L. rosae* Steindachner caught at two sites: near Vereeniging on the Vaal river and near Potchefstroom, in the Boskop Dam reservoir on the Mooi river. Both the Vaal and the Mooi are part of the Orange river system.

REMARKS. The new species can readily be placed in a group of species, together with *Chonopeltis brevis* Fryer and *C. meridionalis*, which is characterized by the possession of two longitudinal bands of pigment spots on the thorax. Also in common with these species *C. australis* is found externally on the host. This is in keeping with the suggestion made by Fryer (1964) that the pigment bands serve to protect developing eggs in the uteri from intense illumination and are therefore found only in species of *Chonopeltis* which are external body surface parasites.

The males of *C. australis* can be distinguished from those of *C. brevis* and *C. meridionalis* by the absence both of any posterior projections on the sympod of leg 2 and of any process on the exopod of leg 4. The females of these three species are very similar and trivial morphological characters must be used to distinguish between them. In *C. brevis* leg 3 is more than twice as long as leg 4 whereas in *C. australis* and *C. meridionalis* it is less than twice as long. The natatory lobes of leg 4 in *C. meridionalis* are rounded and less extensive laterally than in *C. australis*. In addition the scale-covered prominence on the proximal portion of the second maxilla of *C. australis* is a distinctive character.

The structure of the second maxilla of *C. australis* suggests that it is able to function in a prehensile manner although it is not so obviously prehensile as in *C. schoudeteni* Brian and *C. flaccifrons* Fryer, both of which possess a large digitiform process on the proximal portion of the appendage.

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